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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,660	12/28/2000	Yutaka Doi	H0001384 (4970)	9390

7590 12/06/2001

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 12/06/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,660

Applicant(s)

DOI, YUTAKA

Examiner

Ishwar B Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 13-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to an electronic component, classified in class 361, subclass 761.
 - II. Claims 13-17, drawn to a method of producing a layer having at least two different kinds of embedded passive components, classified in class 29, subclass 832.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case product as claimed can be made by another and materially different process such as the product can be without the imaging and etching process. Other process such as thick film process can be used.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Robert D. Fish (33,880) on November 19, 2001 a provisional election was made with traverse to prosecute the invention of an electronic component, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-17 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because the figures are improperly cross hatched. All the parts shown in section, and only those parts, must be cross hatched. The cross hatching patterns should be selected from those shown on page 600-81 of the MPEP base on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-5,9,11,12 are rejected under 35 U.S.C. 102(e) as being anticipated by Felten, US Patent No. 6,317,023.

Regarding claim 1 and 12, Felten discloses an electronic component, comprising:

a substrate layer (printed wiring board 103, see figure 1a and 1i, column 4, line 1-40); and

an insulator layer coupled to the substrate layer, wherein the insulator layer comprises at least two different kinds of embedded passive components (passive components, resistors and capacitors embedded into the adhesive layer, see figure 1A to 1i, column 4, line 1-40).

Regarding claim 2, Felten further discloses one additional layer coupled to the insulator layer, see figure 1c and 1i),

Regarding claim 3, Felton further discloses one additional layer is a metal layer (metal foil 102).

Regarding claim 4, Felton further discloses the electronic component is printed circuit board (printed circuit board 103).

Regarding claim 5, Felton further discloses the substrate layer comprises at least one layer (printed circuit board 103).

Regarding claim 9, Felton further discloses the insulator layer is coupled to the substrate layer (layer 104, see figure 1C, 1D and 1i).

Regarding claim 11, Felton further discloses at least two embedded passive components comprising a resistor and a capacitor (passive components 101, resistor and capacitors, see figure 1c and 1i, column 4, line 1-30).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-8,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Felton, US Patent No. 6,317,023, as applied to claim1-5 above, and further in view of Van De Walle et al, US Patent No. 5,731,747, hereafter referred to Van De Walle.

Regarding claim 6, the applicant is claiming the substrate layer comprises a silicon wafer. Though, Felton does not disclose the substrate as a silicon wafer, the use of silicon wafer is known in the art for the manufacturing of the semiconductor devices and the type of substrate to be used will depend upon the type devices to be manufactured. Further Van De Walle discloses use of a wafer having passive elements for an electronic component. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the assembly of Felton with a silicon wafer in order to have the electronic component with the desired function.

Regarding claim 7, the modified assembly of Felton further discloses a layer of conductive as applied against claim 3.

Regarding claim 8, the conductive material comprise copper or nickel (the metallic foils are those available in the industry. The preferred foils are copper, silver, gold, aluminum, nickel or iron foil, column 4, line 30-40).

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Regarding claim 10, the applicant is claiming the insulator layer comprises at least one of a polycarbonate, a fused silica compound and an alumina compound. Though Felten does not disclose the insulator layer comprises at least one of a polycarbonate, a fused silica compound and an alumina compound, the use of polycarbonate, a fused silica compound and an alumina compound as an insulator is known and will depend upon the type of device and the operating temperature. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the assembly of Felton with the insulator layer comprising at least one of a polycarbonate, a fused silica compound and an alumina compound in order to get an assembly to with desired operating temperature.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tosaki et al., Dunn et al., Weinberg, Smith et al., Ansell et al., Hunt et al., Jennings, Takagi et al., Joly et al., Ehman et al., and Lin et al., disclose the assembly similar to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar B Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

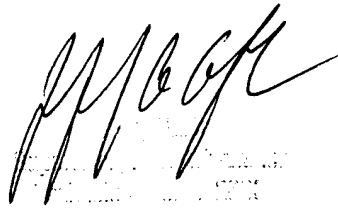
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (703) 308 3301. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
November 30, 2001

A handwritten signature in black ink, appearing to be 'M. G. G.', is written over a faint, illegible stamp.